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Certificate

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of Correction
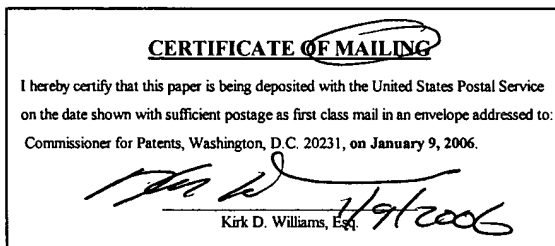
Patent No. 6,970,971

Confirmation No. 4491

Issued: November 29, 2005

Name of Patentee: Warkhede et al.

Patent Title: METHOD AND APPARATUS FOR MAPPING PREFIXES AND VALUES OF A HIERARCHICAL SPACE TO OTHER REPRESENTATIONS

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT FOR PATENT OFFICE MISTAKE (37 C.F.R. § 1.322)

Attn: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

It is requested that a Certificate of Correction be issued to correct Office mistakes found the above-identified patent. Attached hereto is a Certificate of Correction which indicates the requested correction. For your convenience, also attached are copies of selected pages (a) from the issued patent with errors highlighted, and (b) from the Amendment A filed April 25, 2005, with the correct text/instructions.

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In re US Patent No. 6,970,971

It is believed that there is no charge for this request because applicant or applicants were not responsible for such error, as will be apparent upon a comparison of the issued patent with the application as filed or amended. However, the Assistant Commissioner is hereby authorized to charge any fee that may be required to Deposit Account No. 501430.

Respectfully submitted,
The Law Office of Kirk D. Williams

Date: January 9, 2006

By _____ 1/9/2006

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.   :   6,970,971

DATED   :   November 29, 2005

INVENTOR(S) :   Warkhede et al.

It is certified that error(s) appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 12, line 13, replace "the" with -- trie --

PATENT NO. 6,970,971
No. of additional copies

⇨ NONE (0)

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32. An apparatus comprising:

means for generating a first representation of a hierarchical relationship among a plurality of first prefixes, which includes means for determining an ancestor tree based on the plurality of first prefixes;

means for determining an optimized representation of the hierarchical relationship among the plurality of first prefixes, which includes determining an optimized trie representation of the ancestor tree; and

means for generating a mapping of the plurality of first prefixes into a plurality of second prefixes based on the optimized representation.

33. The apparatus of claim 32, wherein the first representation includes a trie.

34. The apparatus of claim 32, wherein optimized representation includes a trie.

35. The apparatus of claim 32, further comprising means for programming an associative memory with the plurality of second prefixes.

36. The apparatus of claim 32, further comprising means for determining a set of mapped lookup values based on the optimized representation.

37. The apparatus of claim 36, further comprising means for generating a lookup value from the set of mapped lookup values based on a particular value.

38. One or more computer-readable media containing computer-executable instructions for performing operations, said operations comprising:

determining a binary trie representation for a plurality of prefixes;

determining an ancestor tree based on the binary trie representation;

determining an optimized trie representation of the ancestor tree; and

determining a mapping of the plurality of the prefixes into a plurality of second prefixes based on the optimized trie representation.

39. The computer-readable media of claim 38, wherein said operations comprise extracting the plurality of prefixes from a configuration table.

40. The computer-readable media of claim 38, wherein the configuration table contains access control, quality of service, or routing information.

41. The computer-readable media of claim 38, wherein said operations comprise causing an associative memory to be programmed with the plurality of second prefixes.

42. The computer-readable media of claim 41, wherein the associative memory is a content-addressable memory.

43. The computer-readable media of claim 38, wherein said operations comprise determining a set of mapped lookup values based on the optimized representation.

44. The method of claim 43, wherein said operations comprise causing the plurality of mapped lookup values to be stored in an associative memory.

45. One or more computer-readable media containing computer-executable instructions for performing operations, said operations comprising:

generating a first representation of a hierarchical relationship among a plurality of first prefixes, which includes determining an ancestor tree based on the plurality of first prefixes;

determining an optimized representation of the hierarchical relationship among the plurality of first prefixes, which includes determining an optimized the representation of the ancestor tree; and   *trie*

generating a mapping of the plurality of first prefixes into a plurality of second prefixes based on the optimized representation.

46. The computer-readable media of claim 45, wherein said operations comprise causing an associative memory to be programmed with the plurality of second prefixes.

47. The computer-readable media of claim 46, wherein said operations comprise storing the plurality of second prefixes in a data structure.

48. The computer-readable media of claim 45, wherein said operations include adding a dummy node for each internal node of the first representation.

49. The computer-readable media of claim 45, wherein the plurality of second prefixes includes a dummy node for an internal node of the first representation.

50. The computer-readable media of claim 45, wherein said operations comprise determining a set of mapped lookup values based on the optimized representation.

51. The computer-readable media of claim 50, wherein said operations comprise causing the plurality of mapped lookup values to be stored in an associative memory.

52. The computer-readable media of claim 45, wherein said operations comprise:

receiving a set of information including a first value;

generating a lookup value from the set of mapped lookup values based on first value; and

generating a lookup word based the lookup value.

53. The computer-readable media of claim 52, wherein said operations comprise:

causing an associative memory to be programmed with the plurality of second prefixes; and

initiating a lookup operation on the associative memory using the lookup word.

* * * * *

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In re WARKHEDE ET AL., Application No. 10/042,847
Amendment A

Claim 39 (original): The apparatus of claim 38, further comprising means for generating a lookup value from the set of mapped lookup values based on a particular value.

Claim 40 (original): An apparatus comprising:

means for determining a binary trie representation for a plurality of prefixes;

means for determining an ancestor tree based on the binary trie representation;

means for determining an optimized trie representation of the ancestor tree; and

means for determining a mapping of the plurality of the prefixes into a plurality of second prefixes based on the optimized trie representation.

Claim 41 (original): The apparatus of claim 40, further comprising means for programming an associative memory with the plurality of second prefixes.

Claim 42 (new): One or more computer-readable media containing computer-executable instructions for performing operations, said operations comprising:

generating a first representation of a hierarchical relationship among a plurality of first prefixes, which includes determining an ancestor tree based on the plurality of first prefixes;

determining an optimized representation of the hierarchical relationship among the plurality of first prefixes, which includes determining an optimized trie representation of the ancestor tree; and

generating a mapping of the plurality of first prefixes into a plurality of second prefixes based on the optimized representation.

Claim 43 (new): The computer-readable media of claim 42, wherein said operations comprise causing an associative memory to be programmed with the plurality of second prefixes.

Claim 44 (new): The computer-readable media of claim 43, wherein said operations comprise storing the plurality of second prefixes in a data structure.

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